

# NEBRASKA INFORMATION TECHNOLOGY COMMISSION

Thursday, February 21, 2002, 9:30 a.m.  
State Office Building, Lower Level-Conference Room F  
301 Centennial Mall-South, Lincoln, Nebraska

## AGENDA

### Meeting Documents:

Click the links in the agenda  
or [click here](#) for all documents (xxx MB)

- 9:30 a.m. Call to Order and Roll Call – Lt. Gov. Heineman
- 9:35 a.m. Notice of Meeting and **Approval of October 31, 2001 Minutes**\* – Lt. Gov. Heineman
- 9:40 a.m. Public Comment
- 9:45 a.m. Report from the Councils, Technical Panel and Staff
1. Community Council
    - a. Council Report
    - b. Building Information Age Communities Conference
  2. Education Council
    - a. Council Report
    - b. **Recommendation for new member\***
  3. State Government Council
    - a. Council Report
    - b. **Government Technology Fund Guidelines (2002 Grant Cycle)**\*
  4. Technical Panel
    - a. Panel Report
    - b. **Video Standards\***
    - c. **Incident Reporting Procedure**\*
  5. Staff
    - a. Statewide Technology Plan Review Update (Schedule and Process)
    - b. NITC 2002 Work Plan
    - c. Project Status Summary - January 2002
    - d. Update on Information Technology Infrastructure Fund Projects
      - NIS (Nebraska Information System)
      - Wireless
      - CJIS
    - e. Update on Business Portal
- 10:30 a.m. NETCOM update
1. **Pilot Project Proposal**\*
- 11:00 a.m. Nebraska Network
1. **Workgroup Charter**\*
  2. Update
- 11:45 a.m. New Business
- 12:00 p.m. Adjournment

(**Bolded** \* indicates action items)

Meeting notice posted to the NITC and Public Meeting Calendar Websites on January 24, 2002.  
Agenda posted to the NITC Website on February 14, 2002 .

## **NEBRASKA INFORMATION TECHNOLOGY COMMISSION**

Wednesday, October 31, 2001, 1:30 p.m.

MAIN LOCATION - EXECUTIVE BUILDING - Room 103, 521 South 14th Street, Lincoln, Nebraska

KEARNEY PUBLIC LIBRARY - 2020 1st Avenue, Information Center-2nd Floor, Kearney, Nebraska

PANHANDLE LEARNING CENTER - 4502 Avenue I, High Plains Room, Scottsbluff, Nebraska

### **PROPOSED MINUTES**

#### **MEMBERS PRESENT:**

Dave Heineman, Lieutenant Governor, Chair

Greg Adams, Mayor, City of York

L. Merrill Bryan, Senior Vice President & Chief Information Officer, Union Pacific

Dr. Eric Brown, Manager, KRVN Radio (via the Kearney Public Library video conference site)

Dr. Doug Christensen, Commissioner, State Department of Education

Hod Kosman, CEO, Platte Valley Financial Services (via the Scottsbluff Panhandle Station video conference site)

Gary Kuck, CEO, Centurion International

Dr. L. Dennis Smith, President, University of Nebraska

#### **CALL TO ORDER, ROLL CALL, NOTICE OF PUBLIC MEETING**

Lieutenant Governor Dave Heineman called the meeting to order at 1:35 p.m. There were seven commissioners present at the time of roll call. A quorum existed to conduct official business. Lieutenant Governor Heineman stated that the meeting notice was posted to the N.I.T.C. and Public Meeting Calendar Web sites on October 15, 2001. The meeting agenda was posted the same Web sites on October 18, 2001. A revised agenda was posted to the Web sites on October 23, 2001.

#### **APPROVAL OF JUNE 13, 2001 MINUTES**

**Commissioner Adams moved to approve the June 13, 2001 minutes as presented. Commissioner Bryan seconded the motion. Roll call vote: Adams-Yes, Brown-Yes, Bryan-Yes, Heineman-Abstaining, Kosman-Yes, Kuck-Yes, Smith-Abstained. Results: 5-Yes, 2-Abstaining, and 0-No. The motion was carried by majority vote.**

#### **PUBLIC COMMENT**

There was no public comment.

#### **REPORT – COMMUNITY COUNCIL**

Anne Byers, Community Information Technology Manager

The Community Council has identified community and rural IT development as its highest priority. The Community Council of the N.I.T.C. collaborated with the University of Nebraska's Technologies Across Nebraska (T.A.N.) initiative in the development of the Community Information Technology Toolkit. The toolkit offers a number of resources to help communities become Information Age communities, including a nine-question assessment to help communities determine how well they are utilizing information technology. The toolkit also contains additional resources, success stories, and answers to frequently asked questions. The toolkit is available at <http://www.nitc.state.ne.us/toolkit> or from <http://technologiesacrossnebraska.unl.edu/>.

Ms. Byers expressed thanks to those who contributed to this effort and reported that this afternoon the Governor's office is releasing a press release announcing the toolkit. Ms. Byers entertained questions and comments from the Commissioners.

[Community Council's Priorities and Timelines](#). Commissioners were provided a written document and brief overview.

[Community Technology Fund Guidelines](#). Ms. Byers reported that this will be the 4<sup>th</sup> funding cycle of grants, with approximately \$200,000 available to grant projects.

The Community Council has identified the following priorities for the 2002 round:

- Projects which use information technology to address community needs related to community and economic development, the delivery of local government and library services, and health care.
- Projects which use information technology to address community needs in innovative ways or projects in which communities are initiating the use of information technology to address community needs.
- Projects which will demonstrate strong collaboration within a community or region in addressing IT development.

Applicants are required to submit their applications electronically this year. If an applicant is unable to submit an electronic copy, alternative arrangements can be made. The guidelines also state that if applicants have not received confirmation that their application was received or experience unexpected server problems, fax copies can be sent as a backup.

In order to provide some additional encouragement for applicants to submit their final reports, we are proposing withholding 10% of the grant award until receipt of a satisfactory final report. Recipients will receive 60% of the grant award in the first installment and 30% of the award in the second installment.

It is anticipated that the guidelines will be released in early November 2001. By January 18, 2002, applicants must notify the N.I.T.C. of their intent to apply. Applications will be due February 15, 2002 with projects being awarded in April 2002.

**Commissioner Smith moved to approve the Community Technology Fund grant guidelines. Commission Bryan seconded the motion. Roll call vote: Smith-Yes, Kuck-Yes, Kosman-Yes, Heineman-Yes, Bryan-Yes, Brown-Yes and Adams-Yes. Results: 7-Yes and 0-No. The motion was carried by unanimous vote.**

## **REPORT – EDUCATION COUNCIL**

Tom Rolfes, Education Information Technology Manager

*Council Report.* The Education Council has met 4 times since the NITC's last meeting and has had presentations on the following: the Distance Education Network Completion Grant; the Midwest Higher Education Cooperative Purchase Program; the Gates Technology Leadership Grant for School Administrators; Internet 2, National Center for Information Technology in Education; and the Technologies Across Nebraska I.T. Toolkit, as well as touring the Kauffman Residential Education Center on the UNL campus. Mr. Rolfes provided an update on the activities of the Operations Work Group, and the Training Advisory Work Group. The Education Council agreed to utilize the regularly scheduled monthly meetings to conduct official business, as well as provide time for the four task groups (infrastructure, funding, needs of the learner, and leading edge technology applications) to meet in work sessions in order to develop work plans for the Council's action items.

[\*Education Council's Priorities and Timelines.\*](#) Commissioners were provided a written document and brief overview.

[\*LB833 Distance Education Network Completion Grant.\*](#) The Distance Education Network Completion Grant, authorized by LB833 of the last Legislative Session, directed the Education Innovation Fund (lottery monies) to make available \$3 million for the completion of K-12 distance learning facilities for those public high schools that were without that potential. The legislation established the Department of Education as Project Manager. Wayne Fisher, Internet and Distance Learning Specialist with the Department of Education Technology Center, reviewed the timelines and progress update report.

[\*Telecommunications Training Grants Report.\*](#) The report provided summary of the grant awards for 2001-02 (9<sup>th</sup> cycle of this grant program). These mini-grant awards leverage an estimated \$1.02 in-kind match for every \$1.00 of state money.

## **REPORT – STATE GOVERNMENT COUNCIL**

Steve Schafer, Chief Information Officer, State of Nebraska

The State Government Council has met three times as a full council and has had two work sessions since the last N.I.T.C. meeting. The State Government Council has continuously been briefed on the standards and guidelines approved by the Technical Panel. The Council has requested more involvement in the development of the standards and guidelines. Security has been addressed and a Security Forum was held on October 3<sup>rd</sup> with 20 agencies represented. A letter was also sent to all agencies, boards and commissions regarding the security and incident reporting procedures. Mr. Schafer entertained questions and comments from the Commissioners.

Commissioner Christensen arrived at 2:00 p.m.

[\*State Government Council Priorities and Timelines.\*](#) Commissioners were provided a written document and brief overview.

[GTCTF Grant Approvals](#). Mr. Schafer explained that the grant application and review process was the same as utilized in prior funding. There is \$250,000 funding available but reduced this amount by 5% in anticipation of budget reductions. With carryover from last year, a total of \$347,920 was available to fund projects. Commissioners had questions on the Security Assessment project from the CIO office and the Enterprise E-Government Security Software project from IMServices. Steve Henderson, Administrator, agreed to provide a report on Phase I and to follow-up with costs for Phase II. It was suggested that University of Nebraska may have faculty who could assist in these projects.

**Commissioner Bryan moved to approve the State Government Council's recommendations for projects funding from the Government Technology Collaboration Fund. Commissioner Smith seconded the motion: Roll call vote: Heineman-Yes, Bryan-Yes, Kosman-Yes, Brown-Yes, Kuck-Yes, Adams-Yes, Smith-Yes, and Christensen-Yes. Results: 8-Yes and 0-No. The motion was carried by unanimous vote.**

*Revisions to Planning and Project Management Guidelines.* Mr. Schafer reported that minor changes will be made to the Planning and Project Management Guidelines.

[E-government Conference](#). The E-Government Conference will be held on November 6<sup>th</sup> at the Cornhusker Hotel in Lincoln. The Governor is moving forward with e-government efforts. Surveys have been sent to businesses to gather information regarding interactions with the state.

## **REPORT – TECHNICAL PANEL**

Walter Weir, Chair

[Technical Panel Priorities and Timelines](#). Commissioners were provided a written document and brief overview.

Since the last N.I.T.C. meeting, the Technical Panel has done numerous project and technical reviews. Regular updates on the N.I.S. and Wireless projects have been received and the Technical Panel has approved their project plans. The five working groups have remained active and have brought two recommendations for action by the Commission.

[Accessibility Standards](#). The Technical Panel would like the N.I.T.C. to consider endorsing the Accessibility Standards presented by the Accessibility Architecture Work Group.

**Commissioner Christensen moved to approve the Accessibility Standards. Commissioner Adams seconded the motion. Roll call vote: Brown-Yes, Kuck-Yes, Adams-Yes, Smith-Yes, Bryan-Yes, Kosman-Yes, Heineman-Yes, and Christensen-Yes. Results: 8-Yes and 0-No. The motion was carried by unanimous vote.**

*Security Procedures and Templates for Handbooks.* The Technical Panel would like the N.I.T.C. to consider endorsing the Security Procedures developed by the Security Architecture Work Group as well as the handbook templates ([Computer Users Security Handbook](#), [IS Technology Staff Handbook](#), [Security Officer Instruction Guide Handbook](#)) with understanding that the templates can be revised per agency's needs.

**Commissioner Smith moved to endorse the Security Procedures, as well as the Security Handbook templates for agency's use. Commissioner Christensen seconded the motion. Roll call vote: Bryan-Yes, Heineman-Yes, Brown-Yes, Kosman-Yes, Adams-Yes, Kuck-Yes, Christensen-Yes, and Smith-Yes. Results: 8-Yes and 0-No. The motion was carried by unanimous vote.**

*Video standards.* The Education Council has requested a presentation on the video standards at their November 30<sup>th</sup> meeting. The Technical Panel will make a recommendation on these standards at the December 11<sup>th</sup> meeting for final approval by the N.I.T.C. at the January meeting.

## **[INFORMATION TECHNOLOGY INFRASTRUCTURE FUND](#)**

Steve Schafer, Chief Information Officer

Funding of projects from this fund is dependent upon approval of project plans by the Technical Panel and the N.I.T.C.

[CJIS](#). The Technical Panel recommends that the N.I.T.C. conditionally approve the Project Plan with the condition that a revised budget, not exceeding the \$250,000 annual appropriation, is to be submitted to the Technical Panel.

**Commissioner Smith moved to conditionally approve the CJIS Project Plan as recommended by the Technical Panel. Commissioner Brown seconded the motion. Roll call vote: Smith-Yes, Adams-Yes, Christensen-Yes,**

**Kuck-Yes, Brown-Yes, Heineman-Yes, Kosman-Yes, and Bryan-Yes. Results: 8-Yes and 0-No. The motion was carried by unanimous vote.**

Wireless. The Technical Panel recommends that the N.I.T.C. accept the Wireless Project Proposal requesting funding for the RFP process.

**Commissioner Christensen moved to accept the Wireless Project Proposal requesting funding for the RFP process. Commissioner Bryan seconded the motion. Roll call vote: Kosman-Yes, Smith-Yes, Bryan-Yes, Heineman-Yes, Christensen-Yes, Brown-Yes, Kuck-Yes, and Adams-Yes. Results: 8-Yes and 0-No. The motion was carried by unanimous vote.**

NIS Update. The Technical Panel has been monitoring the project per the NITC's resolution regarding 10 points. Tom Conroy and Lori McClurg entertained questions from the Commissioners regarding interfacing with UNL's system and phasing out shadow systems.

## **NETCOM UPDATE**

Brenda Decker, Director, Division of Communications, State of Nebraska

The purpose of the NETCOM RFP was to bid out transport services for all state government services. The RFP was released April 30th. A pre-bid meeting was held on May 18<sup>th</sup> and there were 75 persons in attendance representing 35 different companies. Bids were received on August 27<sup>th</sup>, from Alltel, AT&T, Sprint, Qwest, and WorldCom. Four were declared finalists. There were five technical reviewers and four cost analysis reviewers with K-12 and Higher Education representatives. Oral presentations began on September 10<sup>th</sup>. It was anticipated that the bid would be awarded by October 10<sup>th</sup> but the date was moved to October 19<sup>th</sup>. Major issue: every bid described a state-owned private network. On October 19, all bids were rejected, and a statement issued.

The advisory group is evaluating next steps. There is a need to meet with local exchange companies again to further explain NETCOM and its goals. Commissioners expressed the need to move aggressively and directed Ms. Decker to organize a meeting with the Nebraska Information Network and the Nebraska Telephone Association. Lieutenant Governor Heineman will also attend as well as Steve Schafer, State Chief Information Officer.

## **NEW BUSINESS**

*Nebraska Education Network.* Commissioners Smith and Christensen proposed the following resolution for action by the N.I.T.C.:

"The N.I.T.C. directs the chairs of the Education, State Government Council and Technical Panel to explore the concept of a Nebraska Education Network and recommend by January 2002 a method for evaluating the feasibility of such a network. The report to the N.I.T.C. shall be in the form of a charter that includes:

1. Draft goals and objectives of a shared network;
2. Basic requirement of such a network;
3. Critical success factors and other issues that should be addressed;
4. Description of the potential relationship of the network to NETCOM;
5. Potential participants and other stakeholders;
6. Scope, outcomes and timeline for the evaluation."

**Commissioner Smith moved to adopt the proposed resolution. Commissioner Christensen seconded the motion. Roll call vote: Christensen-Yes, Kosman-Yes, Heineman-Yes, Adams-Yes, Smith-Yes, Bryan-Yes, Brown-Yes, and Kuck-Yes. Results: 8-Yes and 0-No. The motion was carried by unanimous vote.**

Commissioner Kosman stated that economic leaders in western Nebraska met with Governor Johanns regarding connectivity in rural Nebraska. This is a large issue and current levels of service and costs are not acceptable. The same standards used in Omaha and Lincoln should be the same for all of Nebraska. Currently, connectivity issues are impeding the panhandle of Nebraska to compete. This must be communicated to the providers and related associations.

## **NEXT MEETING DATE, LOCATION AND TIME**

The next meeting of the NITC will be held in early January. The date will be announced. With no further business, Lieutenant Governor Heineman adjourned the meeting at 3:26 p.m.

Minutes taken by Lori Lopez Urdiales and reviewed by the Office of the CIO/NITC staff.

**Nebraska Information Technology Commission  
Government Technology Collaboration Fund - 2002**

**DRAFT Guidelines**

**Purpose of the Grant Program**

**Establishment of the Government Technology Collaboration Fund**

The Government Technology Collaboration Fund ("GTCF") was created by state statute (Section 86-1513):

"The Government Technology Collaboration Fund is created. The fund shall be granted by the commission. The fund shall be used to provide incentives for collaborative technology projects and programs by state agencies, boards, and commissions and to assist in meeting the technology needs of small agencies as determined by the commission. Expenditures from the fund shall be approved by the commission only after review by the technical panel created in section 86-1511. The fund shall be administered by the Department of Administrative Services. Any money in the fund available for investment shall be invested by the state investment officer pursuant to the Nebraska Capital Expansion Act and the Nebraska State Funds Investment Act."

The Legislature appropriated \$250,000 to this fund for FY2003.

**Funding Priorities**

The following funding priorities have been identified by the State Government Council and approved by the Nebraska Information Technology Commission:

- Projects that further the State Government Council priority of implementing e-government.
- Projects that utilize information technology to further the State Government Council priority of improving collaboration.

**Application Guidelines**

**Deadline**

Applications must be received by 5:00 p.m. on April 15, 2002.

**Eligible/Ineligible Activities**

Activities that support e-government are eligible for funding. Salaries are eligible if they are necessary for the implementation of the overall project. Equipment costs and transmission costs are eligible if they are necessary for the implementation of the overall project.

Buildings, rents, non-telecommunications utilities, and indirect costs are *ineligible* for grant funds.

**Eligible Entities**

Only state agencies, boards and commissions are eligible for Government Technology Collaboration Fund grants. State agencies may submit collaborative projects with local government partners.

## **Match Requirement**

A 25 percent match is required. The match may be shared among project participants. The match may be a cash match, an in-kind match, or a combination of the two. An in-kind match can include time, people, machines, buildings, rent, and utilities. Both cash and in-kind matches must be documented.

Acceptable documentation of an in-kind match include:

- Copies of sign-in sheets for volunteers or other records of volunteer hours.
- A signed letter from an employee's supervisor indicating that he/she has contributed a specified number of hours working on the project.
- A signed letter from the appropriate supervisor/director documenting the use of facilities and equipment.

## **Format and Procedures**

### **Submission of Applications**

All applications must be submitted on the form provided on the NITC Web site (a link is provided at the top of this document or go to <http://www.nitc.state.ne.us/>).

Completed applications must be submitted via e-mail to [rbecker@cio.state.ne.us](mailto:rbecker@cio.state.ne.us). The grant application should be submitted as an attachment in one of these formats: Microsoft Word; WordPerfect; Adobe PDF; or Rich Text Format. Receipt of the grant application will be confirmed by e-mail. If an agency is unable to submit the application as described, contact Rick Becker at (402) 471-7984 prior to the application deadline, to make other arrangements for submitting an application.

**Applications must be received by 5:00 p.m. on April 15, 2002.**

### **Application Review Process**

Applications will be reviewed by staff for compliance with minimum eligibility requirements. An applicant may be asked to revise their proposal if minimum requirements are not met, or to otherwise improve the application. Each application will be scored by reviewers approved by the Technical Panel. The State Government Council will then review the requests and submit a recommendation for funding to the NITC. The NITC may award all or part of available funds to projects based on the competitive process described in these guidelines. The NITC may also reserve a portion of the fund for specific enterprise projects that serve the funding priorities described above. All projects are subject to review by the Technical Panel.

### **Memorandum of Agreement**

Grant recipients must enter into a memorandum of agreement with the NITC. The agreement will commit the agency to the project scope and deliverables, cost, timetable, and reporting requirements.

### **Disbursement of Funds**

Agencies must prepare and sign a disbursement document with supporting information for all grant-supported expenditures. The disbursement document should include the agency's line of coding for its 25% match (unless in-kind personnel costs are being used as match). The Office of the Chief Information Officer will provide the line of coding for the eligible grant share and submit the document to DAS Accounting for payment. Supporting information should include receipts or invoices of all expenditures made with grant funds.



## **Reporting Requirements and Time of Performance**

Grant recipients will be required to submit a progress report six months after funding has been approved. A full report, detailing the results of the project, will be required after the project is finished. Additional reporting may be required at the discretion of the Chief Information Officer.

Projects should be completed within 12 months of receipt of the grant. A grant recipient may request, in writing, up to two extensions of up to three months each. Approval of any extension will be at the discretion of the Chief Information Officer.

## **Right to Audit**

The NITC reserves the right to audit any and all grants for a period of 2 years after project completion

## **For More Information**

For further information, please contact:

Rick Becker, Information Technology Manager  
Office of the CIO/NITC  
521 So. 14<sup>th</sup> Street, Suite 200  
Lincoln, NE 68508-2707  
(402) 471-7984.  
E-mail: [rbecker@cio.state.ne.us](mailto:rbecker@cio.state.ne.us)

**Video Architecture**

|                              |   |
|------------------------------|---|
| <b>Title</b>                 | <b>Video and Audio Compression Standard for Synchronous Distance Learning and Videoconferencing</b> |
| <b>Category</b>              | <b>Video Architecture</b>   |
| <b>Date Adopted</b>          | <b>(DRAFT - Technical Panel Recommends Approval)</b>  |
| <b>Date of Last Revision</b> | <b>January 8, 2002</b>  |
| <b>Date of Next Review</b>   | <b>January 2004</b>   |

**A. Authority**

Neb. Rev. Stat. Section 86-1506 (6). "(The Nebraska Information Technology Commission shall) adopt minimum technical standards, guidelines, and architectures upon recommendation by the technical panel created in Section 86-1511."

The Technical Panel established the Video Standard Work Group on January 9, 2001 to develop this standard.

**B. Purpose and Objectives**

The purpose of this document is to establish video and audio standards that will enable all existing and future synchronous distance learning and videoconferencing facilities in Nebraska to achieve interoperability and an acceptable quality of service.

**C. Standards**

| <b>Compression Standard</b>  | <b>Comments</b>  |
|------------------------------|--|
| MPEG-2                       | <ul style="list-style-type: none"><li>• MPEG 2 is specifically intended for applications that require high quality video or "full motion video."</li><li>• Expected data rates include T-1 (1.5 Mbps) or higher.</li></ul> |
| H.263 video with G.722 audio | <ul style="list-style-type: none"><li>• Low data rate teleconference applications.</li><li>• Expected data rates less than T-1 (1.5 Mbps).</li></ul>   |

**D. Applicability**

These standards apply to synchronous distance learning and videoconferencing facilities as follows:

- If utilizing state owned or leased communications networks:
  - Any synchronous distance learning facility or videoconferencing application which utilizes state owned or leased communications networks must comply with the compression standards listed in Section C; or
  - The entity must provide, or arrange for, the necessary gateway technology to comply with the standards.

**Video Architecture**

- If using state funding:
  - All **new** facilities or applications receiving state funding must comply with the compression standards listed in Section C, unless the facility is joining an existing, non-compliant consortium contract.
  - All **existing** facilities or applications receiving state funding for ongoing operations must convert to the standards listed in Section C as soon as fiscally prudent or upon renewal of any existing communications service contract, whichever comes first.

These standards **do not apply** to the following entities:

- University of Nebraska (relating to the university's academic research mission)
- Legislature
- Any entity which applies for, and receives, a waiver of these requirements from the Technical Panel of the NITC.

GENERAL STATEMENT ON APPLICABILITY

The Governing board or chief administrative officer of each organization is responsible for compliance with these standards. The NITC will consider adherence to technical standards as part of its evaluation and prioritization of funding requests

***E. Implementation***

As part of the original planning process, the work group identified some questions to be considered when forming an implementation plan.

- How will new systems be integrated into the current system using the new standard as they come on line?
- How will existing systems be integrated into the new standard until replaced or upgraded?
- How will the existing system be upgraded to the new standard?
- What is the financial impact and what are ways to minimize it?

The largest impact of this migration will be to the K-12 distance learning consortia. In the case of these consortia it is the recommendation that each consortium upgrade as a group. They should do so when their current contracts expire. All new sites that install interactive distance learning facilities prior to that date should adopt the current technology used by the consortium they will join. Any new consortia installations should adopt the new standard.

When the consortia were originally built, each vendor had to install the CODEC and switching infrastructure to support the specific technology adopted at that time for that consortium. The vendor charged an up front "engineering" fee, which helped to absorb some of the cost of that equipment. Some portion of the on going monthly connectivity fee helps to pay for the rest of that capital cost as well as the maintenance and other operational costs over the life of the contract. Our suggestion is that when a consortium upgrades, it takes on a new contract and the vendor can then follow this same

## Video Architecture

methodology to cover its fiscal obligations. Though the cost of the new equipment will be different to some degree than the originally installed equipment, taken over the life of the contract, it should be a very similar.

An issue related to this concept are those sites who came on late in the contract who may not have paid their full share of the local CODEC and associated switch port costs. These will be relatively small in number, and the diminished scale of return will be minimal.

This plan eliminates the need for many gateways in the system. A single gateway would be needed only when passing between consortia, not at multiple sites within a single consortium. Each consortium could assess its need to share traffic with other consortia until they have each migrated to the new standard. In the interim some gateways already exist in the state and they would still be available as required until migration precludes the need.

### ***F. Responsibility***

An effective program for video standards compliance involves cooperation of many different entities. Major participants and their responsibilities include:

1. Nebraska Information Technology Commission. The NITC provides strategic direction for state agencies and educational institutions in the area of information technology. The NITC also has statutory responsibility to adopt minimum technical standards and guidelines for acceptable and cost-effective use of information technology. Implicit in these requirements is the responsibility to promote adequate quality of service and uniformity for information systems through adoption of policies, standards, and guidelines.
2. Technical Panel Video Standards Work Group. The NITC Technical Panel, with advice from the Video Standards Work Group, has responsibility for recommending video standard policies and guidelines and making available best practices to operational entities.
3. Agency and Institutional Heads. The highest authority within an agency or institution is responsible for interoperability of information resources that are consistent with this policy. The authority may delegate this responsibility but delegation does not remove the accountability.
4. Information Technology Staff. Technical staff must be aware of the opportunities and responsibility to meet the goals of interoperability of information systems.

### ***G. Resource and Background Materials***

See the Video Standards Work Group report, entitled A Video and Audio Standard for the Distance Learning Networks of the State of Nebraska, dated November 28, 2001. This document can be found on the NITC Web site at:  
<http://www.nitc.state.ne.us/standards/>

## Video Architecture

The following resource materials are provided as a public service. Accuracy of content is neither implied nor guaranteed by the NITC or its advisory groups.

For background tutorial material on H.263, see:

[http://www.4i2i.com/h263\\_video\\_codec.htm](http://www.4i2i.com/h263_video_codec.htm)

For background material on MPEG-2, see:

[http://www.bbc.co.uk/rd/pubs/papers/paper\\_14/paper\\_14.html](http://www.bbc.co.uk/rd/pubs/papers/paper_14/paper_14.html) and  
<http://www.crs4.it/~luigi/MPEG/mpeg2.html#What%20is%20MPEG-2>

### **H. Glossary**

#### **Bandwidth**

In digital applications, this term refers to the speed at which data is transmitted. It is usually expressed in terms of bits per second. It is often used interchangeably with the term data rate.

#### **CODEC**

Stands for Encoder / Decoder or Coder / Decoder. This device changes outbound analog video and audio into data and inbound data into analog video and audio. It is a device that attaches directly to the video and audio source (the classroom).

#### **Data Rate**

This is the amount of digital information that a system can process and/or transmit. It is usually expressed in terms of bits per second. It is often used interchangeably with the term bandwidth.

#### **Distance Learning**

Distance learning is the delivery of educational experiences where the instructor(s) and student(s) are in different locations and engaging in learning at the same time (synchronously) or at different times (asynchronously). Synchronous distance learning typically involves 2-way interactive video delivered to two or more classrooms.

#### **G.7xx**

A family of audio protocols with varying specifications as developed by the ITU. Examples include:

| Standard   | Req'd Bandwidth | Frequency Response |
|------------|-----------------|--------------------|
| ITU-TG.711 | 56/64Kbps       | 50Hz – 3.4KHz      |
| ITU-TG.722 | 48/56/64Kbps    | 50Hz – 7KHz        |
| ITU-TG.728 | 16Kbps          | 50Hz – 3.4KHz      |

#### **Gateway**

As used in this document, this term refers to a device or system that allows a system using one protocol standard to communicate with a system using a different protocol standard

**Video Architecture****H.2xx**

A family of video protocols with varying specifications as developed by the ITU. Examples include H.261 and H.263. They are differentiated by the specific algorithms used to encode and decode video.

**H.3xx**

A family of communications protocols with varying specifications as developed by the ITU. Each of these protocols have multiple options of video, audio and data protocols defined within them. Examples include:

H.320 for transportation on an ISDN network

H.321 for transportation on an ATM network

H.323 for transportation on an IP network

**ITU**

International Telecommunication Union, headquartered in Geneva, Switzerland is an international organization within the United Nations System where governments and the private sector coordinate global telecom networks and services. Website: <http://www.itu.int/home/index.html>

**Mbps**

Mega Bits Per Second – Millions of bits per second.

**MPEG**

Motion Picture Experts Group – A body that defines protocols for digitally encoding video and audio. Some of the protocols defined by this group include:

MPEG 1 – Designed to compress the data required to pass analog video and audio.

MPEG 2 – An improvement in efficiency over the algorithms of MPEG 1

MPEG 4 – Designed to incorporate voice, video and data as objects that can be transported interchangeably.

MPEG 7 – A meta data system used as a search engine for other MPEG files.

**Network 3**

The low bandwidth, satellite delivered, teleconference network operated by NET.

**NVCN**

The Nebraska Video Conference Network – A network of the DOC and operated by NET. It is a low bandwidth, terrestrially delivered, teleconference network.

**Teleconference**

A meeting held at two or more locations linked by means of technology.

***I. Related Policies, Standards and Guidelines***

None.

**Security Architecture**

|                              |   |
|------------------------------|---|
| <b>Title</b>                 | <b>Incident Response and Reporting Procedure for State Government</b> |
| <b>Category</b>              | <b>Security Architecture</b>  |
| <b>Date Adopted</b>          | <b>(DRAFT - Technical Panel Recommends Approval)</b>                  |
| <b>Date of Last Revision</b> | <b>January 8, 2002</b>  |
| <b>Date of Next Review</b>   | <b>January 2004</b>   |

***Incident Response and Reporting  
Procedure for State Government***

(Date of last revision: 01/08/02)

*State Agencies shall prepare procedures for reporting security breaches and incidents. Documentation on security incidents shall be filed with the Chief Information Officer for the State of Nebraska.*

***Explanation / Key Points***

Security is a growing problem. Effective response and collective action are required to counteract security violations and activities that lead to security breaches. Agency management, law enforcement, and others must know the extent of security problems in order to make proper decisions pertaining to policies, programs and allocation of resources. Responding to security alerts will help to prevent incidents from occurring. Quick reporting of some incidents, such as new viruses, is essential to stopping them from spreading and impacting other systems. Reporting computer crimes is the only way for law enforcement to deter and apprehend violators.

Effective response to security incidents requires quick recognition of problems and fast mobilization of skilled staff to return systems to normal. This requires prior documentation of procedures and responsibilities of everyone with a role in responding to the emergency. Continuous improvement by eliminating points of vulnerability and applying lessons learned is an essential component of incident response.

Centralized reporting serves the goal of increasing awareness of vulnerabilities and threats to state government as a whole. In particular, centralized reporting is necessary to discern patterns, identify areas of vulnerability, allocate resources, and develop statewide solutions. Centralized reporting does not substitute for

internal reporting to management, reporting to law enforcement, or mobilizing a computer security incident response team (CSiRT). Agencies should develop procedures for internal and external reporting that will meet the needs of centralized reporting with little or no additional work. The centralized reporting is designed to mesh with the postmortem analysis that should follow each incident.

The ultimate goal of security incident response and centralized reporting is to protect data and prevent obstruction of government operations. It is important to distinguish between problems that stem from mistakes or miscommunications and true security incidents that involve either malicious intent or intent to circumvent security measures. Security incident reporting should be used only for true security incidents.

Security incident response should never include retaliation. Defending a system should emphasize preventing security breaches. If there is an intrusion, a defensive response should focus on containing and eradicating the problem, plugging the security hole and getting back to business. Security incident response should never include striking back against attackers. The appropriate law enforcement authorities should handle all punitive actions.

### ***Applicability***

All non-education state agencies, boards, and commissions, which receive a direct appropriation from the Legislature or any state agency that has a direct connection to the state's network. Educational institutions and other entities are encouraged to develop their own security incident and centralized reporting procedures.

### ***Step-by-step procedure(s)***

The Incident Response and Centralized Reporting Procedure for State Government requires that the agency implement the following steps for a complete security incident handling process.

1. Establish general procedures for responding to incidents;
2. Prepare to respond to incidents;
3. Analyze all available information to characterize an intrusion;
4. Communicate with all parties that need to be made aware of an incident and its progress;
5. Collect and protect information associated with an incident;
6. Apply short-term solutions to contain an incident;
7. Eliminate all means of vulnerability pertaining to that incident;
8. Return systems to normal operation;
9. Closure: Identify and implement security lessons learned.

Step 1 should include establishing a computer security incident response team (CSIRT) that can take responsibility for managing security incidents. The



CSIRT can be a virtual team that includes people with a wide range of expertise. Agencies should consider forming a CSIRT that serves multiple entities. A clear description of roles and expectations is essential.

Step 2 should include methods for placing the CSIRT on alert status and ready to take preventative measures. It should include procedures for activating the team once an incident occurs.

Step 4 includes contacting users affected by an incident, security personnel, law enforcement agencies, vendors, the CERT Coordination Center (<http://www.cert.org/>), and other CSIRTs external to the organization. It is essential that each agency establishes and follows a single channel of communication. Multiple sources of information while the incident is underway creates confusion, interrupts the work of the response team, and increases vulnerability if the perpetrator is monitoring communications within the agency.

Step 9, “Closure” is intended to give the organization an opportunity to learn from the experience of responding to an incident. Every successful intrusion or other incident indicates potential weaknesses in systems, networks, operations, and staff preparedness. These weaknesses provide opportunities for improvement. Steps should include the following points (from CERTCC security practices, <http://www.cert.org/security-improvement/practices/p052.html>):

1. Hold a post mortem analysis and review meeting with all involved parties. Do this within three to five working days of completing the investigation of an intrusion. Use the attached reporting form to gather information and guide discussion.
2. Prepare a final report for senior management and the Office of the CIO. This ensures awareness of security issues. Use the attached form (or online version) to report information about the security incident to the Office of the Chief Information Officer. Incidents should be reported no later than 5 working days after returning systems to normal operation.
3. Revise security plans and procedures and user and administrator training to prevent future incidents. Include any new, improved methods resulting from lessons learned.
4. Determine whether or not to perform a new risk analysis based on the severity and impact of an intrusion.
5. Take a new inventory of your system and network assets.
6. Participate in investigation and prosecution, if applicable.

### ***Terminology***

Agency. As used here, an agency is any non-education agency, board or commission, which receives a direct appropriation from the Legislature.

Security Incident. A security incident includes, but is not limited to the following events, regardless of platform or computer environment:

1. Evidence of tampering with data;
2. Denial of service attack on the agency;
3. Web site defacement;
4. Unauthorized access or repeated attempts at unauthorized access (from either internal or external sources);
5. Social engineering incidents;
6. Virus attacks which adversely affect servers or multiple workstations;
7. Other incidents that could undermine confidence and trust in the state's information technology systems.

### ***Related Rules***

Draft security standards for the federal Health Insurance Portability and Accountability Act (HIPAA) would establish administrative procedures to guard data integrity, confidentiality, and availability. These include security incident procedures (45 CFR Part 142.308 (a)(9):

“(9) Security incident procedures (formal documented instructions for reporting security breaches) that include all of the following implementation features:

“(i) Report procedures (documented formal mechanism employed to document security incidents).

“(ii) Response procedures (documented formal rules or instructions for actions to be taken as a result of the receipt of a security incident report).”

### ***Attachments/ Form***

# State of Nebraska Cyber Threat and Computer Intrusion Incident Reporting Form

Send completed form to: slschafe@notes.state.ne.us  
or  
Steve Schafer  
Office of the CIO  
521 S 14th Street, Suite 200  
Lincoln, NE 68508-2707

## *Point of Contact Information*

|                       |  |
|-----------------------|--|
| Name                  |  |
| Title                 |  |
| Telephone/Fax Numbers |  |
| Email                 |  |
| Agency                |  |

## **B. Incident Information**

|  |  |
|--|--|
| <b>1. Background Information:</b>  |  |
| a. Agency (if same as above, enter "SAME"):                                  |  |
| b. Physical Location(s) of affected computer system/network (be specific):   |  |
| c. Date/time of the incident:  |  |
| d. Duration of the incident:   |  |
| e. Is the affected system/network critical to the agency's mission? (Yes/No) |  |

|   |  |
|---|--|
| <b>2. Nature of Problem (check all that apply):</b> |  |
| a. Intrusion  |  |
| b. System impairment/denial of access               |  |
| c. Unauthorized root access                         |  |
| d. Web site defacement                              |  |
| e. Compromise of system integrity                   |  |
| f. Hoax   |  |
| g. Theft  |  |
| h. Damage   |  |
| i. Unknown  |  |
| j. Other (provide details in remarks)               |  |
| k. REMARKS:   |  |

|   |  |
|---|--|
| <b>3. Has your agency experienced this problem before? (Yes/No; If yes, please explain in the remarks section.)</b> |  |
| a. REMARKS:   |  |

|   |  |
|---|--|
| <b>4. Suspected method of intrusion/attack:</b> |  |
| a. Virus (provide name, if known)               |  |
| b. Vulnerable exploited (explain)               |  |
| c. Denial of Service                            |  |
| d. Trojan Horse                                 |  |
| e. Distributed Denial of Service                |  |
| f. Trapdoor                                     |  |
| g. Unknown                                      |  |
| h. Other (Provide details in remarks)           |  |
| i. REMARKS:                                     |  |

|   |  |
|---|--|
| <b>5. Suspected perpetrator(s) or possible motivation(s) of the attack:</b> |  |
| a. Insider/Disgruntled Employee   |  |
| b. Former employee  |  |
| c. Other (Explain remarks)  |  |
| d. Unknown  |  |
| e. REMARKS:   |  |

|   |
|---|
| <b>6. The apparent source (IP address) of the intrusion/attack:</b> |
|---|

|   |
|---|
| <b>7. Evidence of spoofing (Yes/No/Unknown)</b> |
|---|

|   |  |
|---|--|
| <b>8. What computers/systems (hardware and software) were affected (Operating system, version):</b> |  |
| a. Unix   |  |
| b. OS2  |  |
| c. Linux  |  |
| d. VAX/VMS  |  |

|                                      |  |
|--------------------------------------|--|
| e. NT                                |  |
| f. Windows                           |  |
| g. Sun OS/Solaris                    |  |
| h. Other (Please specify in remarks) |  |
| i. REMARKS:                          |  |

|  |  |
|--|--|
| <b>9. Security Infrastructure in place. (Check all that apply)</b> |  |
| a. Incident/Emergency Response Team                                |  |
| b. Encryption  |  |
| c. Firewall  |  |
| d. Secure Remote Access/Authorization Tools                        |  |
| e. Intrusion Detection System                                      |  |
| f. Security Auditing Tools   |  |
| g. Banners   |  |
| h. Packet filtering  |  |
| i. Access Control Lists  |  |
| j. REMARKS:  |  |

|  |  |
|--|--|
| <b>10. Did intrusion/attack result in a loss/compromise of sensitive or information classified as private?</b> |  |
| a. Yes (provide details in remarks)  |  |
| b. No  |  |
| c. Unknown   |  |
| d. REMARKS:  |  |

|  |  |
|--|--|
| <b>11. Did the intrusion/attack result in damage to system(s) or data?</b> |  |
| a. Yes (provide details in remarks)  |  |
| b. No  |  |
| c. Unknown   |  |
| d. REMARKS:  |  |

|   |  |
|---|--|
| <b>12. What actions and technical mitigation have been taken?</b> |  |
| a. System(s) disconnected from the network?                       |  |
| b. System Binaries checked?                                       |  |
| c. Backup of affected system(s)?                                  |  |
| d. Log files examined?  |  |
| e. Other (Please provide details in remarks)                      |  |
| f. No action(s) taken   |  |
| g. REMARKS:   |  |

|   |  |
|---|--|
| <b>13. Has law enforcement been notified? (Check all that apply.)</b> |  |
| a. Yes-local law enforcement  |  |
| b. Yes-Nebraska State Patrol  |  |
| c. Yes-FBI field office   |  |
| d. Not  |  |
| e. REMARKS:   |  |

|   |  |
|---|--|
| <b>14. Has another agency/organization been informed as assisted with the response?</b> |  |
| a. Yes-Information Management Services  |  |
| b. Yes-Division of Communications   |  |
| c. Yes-CERT-CC  |  |
| d. Yes-Other (provide details in remarks)   |  |
| e. No   |  |
| f. REMARKS:   |  |

|                                |
|--------------------------------|
| <b>15. Additional Remarks:</b> |
|--------------------------------|

If the reported incident is a criminal matter, you may be contacted by law enforcement for additional information.

### **C. Closure Information (Optional, Except 9 & 10)**

**1. (Optional) Did your detection and response process and procedures work as intended? If not, where did they not work? Why did they not work?**

**REMARKS:**

**2. (Optional) Methods of discovery and monitoring procedures that would have improved your ability to detect an intrusion.**

**REMARKS:**

**3. (Optional) Improvements to procedures and tools that would have aided you in the response process. For example, consider using updated router and firewall filters, placement of firewalls, moving the compromised system to a new name or IP address, or moving the compromised machine's function to a more secure area of your network.**

**REMARKS:**

**4. (Optional) Improvements that would have enhanced your ability to contain an intrusion.**

**REMARKS:**

**5. (Optional) Correction procedures that would have improved your effectiveness in recovering your systems.**

|                 |
|-----------------|
| <b>REMARKS:</b> |
|-----------------|

|   |
|---|
| <b>6. (Optional) Updates to policies and procedures that would have allowed the response and recovery processes to operate more smoothly.</b> |
| <b>REMARKS:</b>   |

|   |
|---|
| <b>7. (Optional) Topics for improving user and system administrator preparedness.</b> |
| <b>REMARKS:</b>   |

|   |
|---|
| <b>8. (Optional) Areas for improving communication throughout the detecting and response processes.</b> |
| <b>REMARKS:</b>   |

|  |
|--|
| <b>9. (Required) A description of the costs associated with an intrusion, including a monetary estimate if possible.</b> |
| <b>REMARKS:</b>  |

|   |
|---|
| <b>10. (Required) Summary of post mortem efforts.</b> |
| <b>REMARKS:</b>                                       |



# **Nebraska Information Technology Commission Procedures for Updating the Statewide Technology Plan January 2002**

## **A. STATUTORY PURPOSES OF THE STATEWIDE TECHNOLOGY PLAN**

1. Statutory Requirement: Section 86-1506(6). The commission shall: (1) By July 1, 1999, and each July 1 thereafter, adopt policies and procedures used to develop, review, and annually update a statewide technology plan;
2. Establish a statewide vision and strategy for telecommunications infrastructure (Section 86-1501);
3. Establish a statewide vision and strategic plan to guide investments in information technology (Section 86-1502);
4. Adopt guidelines regarding project planning and management, information sharing, and administrative and technical review procedures involving state-owned or state-supported technology and infrastructure [Section 86-1506(5)];
5. Adopt minimum technical standards, guidelines and architectures [Section 86-1506(6)];

## **B. HISTORY OF THE STATEWIDE TECHNOLOGY PLAN**

1. June 29, 1999: Policies and Procedures for Preparing the Statewide Technology Plan
  - Reviewed statutory requirements
  - Proposed five major parts of the statewide technology plan
  - Established a timeline to complete the plan by February 1, 2000
2. January 25, 2000: Adopted United 2000 Statewide Technology Plan
  - Section 1: Goals (includes vision, mission, and priorities)
  - Section 2: Coordination of Information Technology Advisory Groups
  - Section 3: Technical Infrastructure
  - Section 4: Planning and Project Management
  - Section 5: Implementation Plan
3. June 13, 2001: Adopted United 2001 Statewide Technology Plan. Changes included:
  - Revisions to Section 1 regarding Council Priorities
  - Minor revisions to Section 2 regarding Council Charters
  - Revisions to Section 3 regarding Components of the State Enterprise Architecture
  - Minor revisions to Section 4 regarding Planning Requirements
  - Revisions to Section 5 regarding Council Action Items

In approving the Statewide Technology Plan for 2001, commissioners expressed concerns about tracking the accomplishments and status of last year's statewide plan, as well as monitoring adherence and compliance to the standards of this year's plan. Commissioners requested that the Councils develop detailed timelines for the Action Items.

## C. PROPOSED REVIEW AND REVISION FOR 2002 STATEWIDE TECHNOLOGY PLAN

| Section  | Anticipated Changes  |
|--|--|
| 1. NITC vision, mission and goal statements;<br>Council priorities | NITC – review vision, mission and goals;<br>Councils – revise priorities;  |
| 2. Coordination of Advisory Groups                                 | None   |
| 3. Enterprise architecture   | Technical Panel – Review and revise framework<br>and components of the technical architecture;   |
| 4. Planning and project management<br>requirements                 | Limited review prior to July 1;<br>Future reviews should include: <ul style="list-style-type: none"><li>• Project proposal form;</li><li>• Methods for determining value;</li><li>• Project management and quality<br/>assurance;</li><li>• Post implementation evaluations;</li></ul>   |
| 5. Implementation plan   | Councils and Technical Panel – Develop new<br>action items;  |
| 6. Effectiveness measures  | New section – establish procedures to determine<br>the following: <ul style="list-style-type: none"><li>• Statewide indicators of the use of<br/>information technology in education,<br/>communities, and every level of<br/>government service to improve economic<br/>opportunities and quality of life for all<br/>Nebraskans... [Section 86-1514 (1)];</li><li>• Success of the NITC in achieving its goals<br/>and carrying out its implementation plan.</li></ul> |

## D. PROPOSED TIMELINE

February and March

- Technical Panel and Councils work on priorities, implementation plan and effectiveness measures;

April

- NITC reviews vision, mission statement, goals and priorities;
- Councils continue work on implementation plan and effectiveness measures;

May

- Draft revisions provided to NITC for review and comment;

June

- NITC reviews and adopts 2002 Statewide Technology Plan.

# **DRAFT**

## **NITC Work Plan for 2002**

### **January 2002 Meeting**

1. Standards and Guidelines
  - a. Video standards (action item)
  - b. Security incident reporting procedures for non-education state agencies (action item)
2. Statewide Technology Plan 2002
  - a. Adopt schedule and process for updating Statewide Technology Plan
  - b. Decide scope of review
3. Statewide Telecommunications Aggregation
  - a. NETCOM
  - b. Consider charter to establish Nebraska Network Advisory Group
4. Other Business
  - a. Consider sponsorship of Community IT Development Conference
  - b. Approve Government Technology Collaboration Fund Guidelines

### **April 2002 Meeting**

1. Statewide Technology Plan 2002
  - a. Update on activities
  - c. Review NITC vision, mission, and goals
2. Statewide Telecommunications Aggregation
  - a. NETCOM
  - b. Update on Nebraska Network Advisory Group
3. Other Business
  - a. Approve Community Information Technology Grants (FY2002)
  - b. Review Action Plan for Technologies Across Nebraska

### **June 2002 Meeting (late June)**

1. Statewide Technology Plan 2002
  - a. Review progress on prior year's activities (what we have we accomplished compared to what was planned)
  - b. Review and adopt revised Statewide Technology Plan
2. Statewide Telecommunications Aggregation
  - a. NETCOM
  - b. Update on Nebraska Network Advisory Group
3. Other Business
  - a. Approve Government Technology Collaboration Fund Grants (FY2003)
  - b. Establish work plan for Reports to Legislature
    - Prioritized list of projects (86-1506)
    - Biennial Progress Report (86-1508)
    - Annual Report on Information Technology Infrastructure Act (81-11,102)
  - c. Summary of project status reports (submitted in July)
  - d. Summary of agency technology comprehensive plans
4. Standards and Guidelines (Update on progress)

### **September 2002 (Special Meeting)**

1. Statewide Telecommunications Aggregation
  - a. Receive final report and recommendations on the Nebraska Network

### **November 2002 Meeting (prior to November 15)**

1. Adopt prioritized list of projects
2. Adopt Reports to Governor and Legislature
3. Statewide Telecommunications Aggregation
4. Standards and Guidelines

## BACKGROUND INFORMATION

### 1. Major Functions of the NITC

- Provide strategic direction for information technology investments in Nebraska;
- Assist policy makers with budget decisions;
- Improve accountability for information technology;

### 2. Statutory Duties of the NITC

- *Section 86-1506*
  - (1) Annually update the statewide technology plan;
  - (2) Create a technology information clearinghouse;
  - (3) Adopt policies and procedures to provide incentives for investments in information technology infrastructure services;
  - (4) Determine a broad strategy for developing IT development in Nebraska, including long-range funding strategies;
  - (5) Adopt guidelines regarding project planning and management, information sharing, and technical review procedures for state-owned or state-supported technology and infrastructure. Government entities, state agencies, and political subdivisions shall submit projects, which directly utilize state-appropriated funds for information technology purposes to this process.
  - (6) Adopt minimum technical standards, guidelines, and architectures;
  - (7) Establish ad hoc advisory groups to make recommendations on specific topics;
  - (8) By November 15 of each even-numbered year, make recommendations to the Governor and the Legislature, including a prioritized list of projects;
  - (9) Approve grants from the Community Technology Fund and Government Technology Collaboration Fund;
  - (10) Adopt schedules and procedures for reporting needs, priorities, and recommended projects.
- *Section 86-1508*
  - (1) By November 15 of each even-numbered year, the NITC shall submit a progress report to the Governor and Legislature
- *Section 81-1190 to 81-11,102 (Information Technology Infrastructure Act)*
  - (1) "The Commission should have the responsibility to establish goals, guidelines, and priorities for information technology infrastructure." (81-1192)
  - (2) Approve project plans before initiating contracts or expenditures (81-1196.01);
  - (3) Develop procedures and issue guidelines regarding the review, approval, and monitoring of enterprise projects that benefit from the fund (81-1199);
  - (4) Monitor the status or projects implemented under the ITIF, including a complete accounting of all project costs by fund source.
  - (5) Report annually to the Governor and the Appropriations Committee concerning activities pursuant to the Information Technology Infrastructure Act. (81-11,102)
- *LB 543 Section 162 (2001) Intent Language*
  - (5) The Education Council may:
    - (a) Prepare a comprehensive, coordinated plan for the delivery of educational programs and services in Nebraska through telecommunications systems. The plan shall identify the educational Telecommunications goals, objectives, and priorities from a statewide perspective and the unique role of each institution in meeting the statewide goals, objectives, and priorities within the parameters contained in statutory role and mission assignments;
    - (b) Develop an ongoing process by which the objective assessment of unmet needs and demands for satellite and terrestrially based programming will be undertaken;
    - (c) Develop a formal process to prioritize identified unmet programming needs;
    - (d) Selectively identify sectors and institutions to serve as program originators to meet the prioritized unmet programming needs;
    - (e) Submit a report to the Legislature and the Governor by October 15, 2001, providing an update of distance education and Education Council accomplishments;

- (f) Develop a coordinated, phased plan which includes consolidated institutional program origination and receive budget requests and a capital and technical operating budget request of the Nebraska Educational Telecommunications Commission and make prioritized recommendations to the NITC by October 15, 2001, concerning the requests as they relate to subdivisions (7)(a) through (d) of this section, the avoidance of program-origination duplication, and the appropriate use of technology;
- (g) Encourage and assist in the development of cooperative programming among the various sectors and institutions;
- (h) Develop operating and scheduling criteria, policies, and priorities for approval by the Nebraska Educational Telecommunications Commission;
- (i) Collaborate with and coordinate activities with the Nebraska Information Technology Commission; and
- (j) Operate in liaison with the technical review panel of the Nebraska Information Technology Commission.

### 3. NITC Goals (Statewide Technology Plan)

- *NITC Vision Statement*  
"Promote the use of information technology in education, health care, economic development, and all levels of government services to improve the quality of life of all Nebraskans."
- *NITC Mission Statement*  
"The mission of the Nebraska Information Technology Commission is to make the State of Nebraska's information technology infrastructure more accessible and responsive to the needs of its citizens, regardless of location, while making investments in government, education, health care and other services more efficient and cost effective."
- *NITC Goals* (Refer to Statewide Technology Plan for additional detail)
  - (1) Support the development of a unified statewide telecommunications infrastructure that is scalable, reliable and efficient....
  - (2) Coordinate the state's investment in telecommunications infrastructure so as to develop new ways to aggregate demand, reduce costs, and create support networks; encourage collaboration between communities of interest; encourage competition among technology and service providers.
  - (3) Determine a broad strategy and objectives for developing and sustaining information technology development in Nebraska, including long-range funding strategies....

### 4. NITC Policy Resolutions (copies are located at [www.nitc.state.ne.us/nitc/](http://www.nitc.state.ne.us/nitc/))

- FCC Formula for distribution of national Universal Service Funds (1/25/2000);
- Endorse purposes of LB 1349 (2000) regarding amendments to the Information Technology Infrastructure Act (1/25/2000);
- Funding for the Nebraska Information System (4/20/2000);
- Endorse recommendation of the TINA Advisory Committee that the State move forward on pursuing the "prime contractor" alternative for implementation of statewide aggregation of telecommunications service (4/20/2000);
- Endorse preliminary exploration of Nebraska Network (10/31/2001).

January 31, 2002

Patrick O'Donnell  
Clerk of the Legislature  
State Capitol  
Lincoln, Nebraska 68509

Subject: Project Status Summary (December 31, 2001)

Dear Mr. O'Donnell:

Section 86-1510 requires the Chief Information Officer to report the status of enterprise projects to the NITC, the Governor, and the Legislature. Section 81-1196.01 also requires semi-annual progress reports for enterprise projects funded through the Information Technology Infrastructure Fund (ITIF).

NITC guidelines for project status reporting apply to any project using funds appropriated from the Information Technology Infrastructure Fund and to all non-education state agencies with projects that cost \$250,000 or more. The Nebraska Information System was the only project to expend funds from the ITIF through December 31, 2001.

Agencies submitted status reports on the following projects for the reporting period ending December 31, 2001:

- DAS – Communications; Public Safety Wireless System RFP Process
- DAS – Nebraska Information System (NIS)
- Crime Commission – CJIS Project
- Fire Marshal – Web based applications
- Health and Human Services – Medicaid Management Information System (MMIS) and NFOCUS projects
- NETC: 901 Satellite System, 902 Neb\*Sat, 909 NTSC Transmitter Replacements, 911 Satellite Transponder, 916 Public Radio Construction, 918 Falls City Translator Tower, 913 Carpenter Telecommunications Center Renovation, 919 DTV Project, 991 UNO TV Equipment Replacement;
- Retirement: NPERS Information Technology Project
- Roads: Nebraska Online Truck Permit Issuance System

A summary of information regarding these projects is attached. All status reports are available on a password-protected web site (<http://www.nitc.state.ne.us/itpm/>), with access by the Office of the CIO, Legislative Fiscal Office and Budget Division.

Please contact me, if you have any questions or if there are other projects that should submit project status reports.

Sincerely,

Steve Schafer  
Chief Information Officer

Attachment

Copy: Senator Bromm  
Senator Wehrbein

**NEBRASKA INFORMATION TECHNOLOGY COMMISSION**  
**PROJECT STATUS SUMMARY**  
**JANUARY 2002**

**Administrative Services Department**  
**NEBRASKA INFORMATION SYSTEM (NIS)**

After an extended delay for contract negotiations, work on the NIS project began on August 13. Below are the target completion dates for the five phases of the project:

|                                     |               |
|-------------------------------------|---------------|
| Phase 1 Financials and Purchasing   | July 2002     |
| Phase 2 HR & Payroll                | January 2003  |
| Phase 3 Capital Projects and Grants | August 2002   |
| Phase 4 Budgeting                   | June 2002     |
| Phase 5 Inventory                   | December 2002 |

An independent IBM team conducted a project management review at the end of November. The purpose of the review was to confirm that sound project management procedures were in place. The status report dated December 14, 2001, concluded that “the project is under control, is in budget and on schedule.” The IBM team made several findings and recommendations. These included:

- The initial workplan was not in place;
- Issue management exists, but should be incorporated into status meetings and project procedures;
- Determine project risks, mitigation strategies and contingency plans;
- Document the communications plan.

A copy of the report is available on the project management web site (<http://www.nitc.state.ne.us/itpm/>). Since then, the project team has prepared a detailed work plan, which project management is tracking closely. The NIS team has also begun producing a weekly “project scorecard” which provides a quick assessment of overall project health. Copies will be posted to the project management web site.

In addition to monthly meetings of the NIS Steering Committee, the NIS project presented an update to the Technical Panel and the NITC in October. Another report is set for the February Technical Panel and NITC meetings. These meetings address progress in meeting the conditions established by the NITC as part of its approval of the NIS project plan. A list of the conditions are included in the minutes of the May 23 NITC meeting (<http://www.nitc.state.ne.us/nitc/>). The resolution assigns the CIO responsibility to monitor these conditions.

**Administrative Services Department – Division of Communications**  
**PUBLIC SAFETY WIRELESS SYSTEM RFP PROCESS**

In October 2001, the NITC approved a project plan that included vendor selection and contract negotiation. The project status report indicates that the project is on schedule, within budget and on target to meeting objectives and requirements. All milestones have been completed for the Request For Proposal (RFP) process, except the final step of completing contract negotiations

with the selected vendor. The remaining milestone is scheduled for completion by February 15, 2002.

## **Crime Commission CRIMINAL JUSTICE INFORMATION SYSTEM (CJIS)**

CJIS funds and sponsors a number of projects. These include projects that either involve or directly affect both state and local agencies. Many factors affecting project completion are out of the control of CJIS (a cooperative project that implements programs and projects on a voluntary basis) or that are dependent upon outside resources being available. As such, CJIS continues to move forward on all of its various subprojects but cannot necessarily control many of the factors relating to them.

The project status report discusses progress on four subprojects:

- 1) VINE is an automated victim notification system. It is currently in full statewide use (The Department of Correctional Services as well as all county and city jails participating). Data is also extracted and pushed to NCJIS for statewide access. Work was done with Sarpy County and Printrak, their new software vendor, to implement data consistent with current VINE and NCJIS needs. Since implementation in May, 1999, VINE activity has had steady use with 31,716 calls to VINE inquiring about an offender's status; 3,357 people registering for notification and 3,067 notifications (2,247 confirmed). At any given time there are approximately 300 people registered to be notified about an offender leaving secure custody.
- 2) NCJIS is a secure Internet based data mart for criminal justice professionals. It allows verified users to access indexed information including jail bookings, Patrol Criminal Histories (PCH), sex offender registry (SOR), probation, corrections/parole, physical searches, a database for sharing agency resources and driver histories. Photo extracts from 64 jails are in place and mugshots are being posted to jail records on NCJIS. Additional training was held for local agencies and approximately 150 agencies now have access to NCJIS. In this reporting period we have added protection order information to NCJIS. This information, consistent with data posted to NCIS, is extracted from JUSTICE whenever court personnel enter issuance or service data. Additionally, two other systems have been added that do not include new data. One is a newsgroup feature that will allow users to post questions, general announcements or job listings. The other is a transportation module, developed in conjunction with the Nebraska Sheriffs Association, that agencies can post upcoming travel on to try and develop shared transport of prisoners by agencies.
- 3) Sleuth is a law enforcement records management system (RMS). CJIS has procured, through state contract, 100 licenses to allow local agencies to use this so there can be a standard, approved system that meets state and federal reporting needs as well as integration objectives. By assisting agencies in selection and implementation it will ease the problems many agencies meet in dealing with commercial companies. We have continued to add functionality and complete NIBRS testing. Through December approximately 55 agencies have been trained on Sleuth. The vendor has also hired a second local installation and support person. This will provide better training, response and initial support for local agencies. In October we hosted the first Nebraska Sleuth Users Group Meeting, which provided an ideal opportunity for interaction between agencies, the vendors and state personnel.
- 4) Prosecution Automation -- As with law enforcement, many prosecutors do not have automation in their offices. This hurts local data handling but also hinders integration.



Paralleling the Sleuth acquisition we developed a Request For Proposal (RFP) (using a subcommittee of county attorneys, courts and the Attorney General's office) to get a state contract for a commercial package to be used in local offices and extract data for use in JUSTICE, criminal histories and other sections of the criminal justice cycle. The RFP was issued in August and we received 14 proposals. Reviews led to four vendors being invited to Lincoln in December for live demonstrations. An announcement of contract award is scheduled for January 2002.

- 5) CJIS Technology Conference-We hosted the 3rd annual CJIS Technology Conference in October. The 150 attendees were able to discuss state and local initiatives as well as see vendor's products. Private and government initiatives were highlighted.

Plans for the next reporting period include awarding a contract for the prosecutor software and continued installations of Sleuth.

### **Educational Telecommunications Commission (NETC)**

#### **INFORMATION TECHNOLOGY PROJECTS AND CAPITAL CONSTRUCTION PROJECTS**

The table, below, summarizes the status of the nine projects at the NETC:

| Project Title  | Project Status |               |          | Comments  |
|--|----------------|---------------|----------|---|
|  | On Schedule    | Within Budget | In Scope |   |
| Program 901 Satellite System                               | No             | Yes           | Yes      | This program encompasses a great deal of technical activity. All of the capital purchases for the Neb*Sat system are included in this program (901). Five projects are continuing from the prior biennium (Concord Interconnect, NET Classroom Upgrade, Video on Demand Phase 2, Network 3 Upgrade, and Network 3 Expansion). A sixth project, satellite dish matching grants, may not be needed. Network 3 expansion is physically and fiscally complete |
| Program 902 Neb*Sat  | Yes            | Yes           | Yes      | This program encompasses 5 Neb*Sat projects. All of the new capital purchases for the Neb*Sat system are included in this program (902).  |
| Program 909 NTSC Transmitter Replacements                  | Yes            | Yes           | Yes      | The multi-transmitter bid responses have been received and are under evaluation. It is expected that the bid for all transmitters will be awarded in this quarter, with delivery in subsequent quarters.  |
| Program 911 Satellite Transponder Lease                    | Yes            | Yes           | Yes      | The DTV satellite encoding system is in the process of upgrade. When complete, transponder 4 will be completely full. NET intends to migrate MCPC traffic to transponder 2.   |
| Program 913 Carpenter Telecommunications Center Renovation | Yes            | Yes           | Yes      | The original program statement was based on operational needs and was a thorough look at what NETC saw as the future direction it needed to take. The actual budget awarded was scaled back from the original plan. This has made it necessary to conduct an abbreviated examination of the program statement. We need to compare the original to the Legislative intent of LB 542.   |
| Program 916 Public Radio Construction                      | Yes            | Yes           | Yes      | The transmitter has been installed, tested and the FCC has awarded a final license for the new  |

|  |     |     |     |   |
|--|-----|-----|-----|---|
|  |     |     |     | channel assignment. This project is now complete and will no longer be reported on.   |
| Program 918 Falls City Translator Tower                      | Yes | Yes | Yes | The new tower was constructed; all antennas and transmission lines were moved to the new tower; and the old tower was removed. All work is done, but still waiting on the final FCC license.  |
| Program 919 DTV Project Hardware purchase and system upgrade | Yes | Yes | Yes | At this time, adequate funding has been secured for the transmissions and retransmissions portions of the DTV Construction project. Adequate funding is not in place at this time to fully fund the digital production conversion. The production conversion project will be phased-in as federal and other funding sources, as well as actual costs, become known. |
| Program 991 UNO TV Equipment Replacement                     | Yes | Yes | Yes | This is a one-time operational fund to allow UNO Television to purchase a video server. An initial purchase order has been issued.  |

### **State Fire Marshal**

#### **WEB BASED APPLICATIONS**

The project status report indicates that Phase I of the project is behind schedule, over budget, and is not meeting objectives and requirements. The agency will review the entire project in February and will focus on only the essential and most beneficial items. Other issues include Internet security and relationship to NIS.

### **Health and Human Services System CHARTS II**

The CHARTS / SDU Integration Steering Committee meets bi-weekly. In conjunction with these meetings, the project team submits a general update on major issues and project status reports on large components of the project. These reports are available on the Project Status Reporting Web Site (<http://www.nitc.state.ne.us/itpm/>).

Major developments during the last six months include:

1. Independent verification and validation. The TRW consulting firm conducted its third review of the CHARTS project in September. The full report and a summary are available on an internal web site: <http://imsweb01.ims.state.ne.us/cio/independent.htm>
2. The focus of work on the CHARTS application for the reporting period was testing and data conversion. That was accomplished and all critical defects were resolved prior to implementation in December.
3. The CHARTS II application went live at the end of December.

Part of the project team will continue to assist with implementation of CHARTS II and the State Disbursement Unit. The rest of the project team has begun work on enhancements to CHARTS that are necessary to meet federal PRWORA requirements. A project plan has been developed to guide that work.

## **Health and Human Services System MMIS**

The project status report indicates that the project is on schedule, and on target to meet objectives, but expenditures are over budget. It is anticipated that contractor costs will drop as more work is transferred to the HIPAA project. The report on the status of the Medicaid Management Information System (MMIS) includes a financial status, a HIPAA impact assessment, and a Gantt chart. Progress during the reporting period included work on the following:

MMIS CSR Release Management. Three major MMIS CSR releases are planned prior to system freeze for HIPAA effort. CSR Release 4 was implemented on October 15, 2001 and CSR Release 5 was implemented on December 17, 2001.

MMIS Data Support. Dropped unnecessary indexes on production database tables to eliminate redundancies and save DASD space. Identified performance opportunities in several programs and created CSR's to implement the changes. Provided on-call support throughout the period. Ongoing project.

HIPAA. Received approval from CMS on the HIPAA Implementation Advance Planning Document (APD) on November 2, 2001. EDI Translator RFP was finalized and released on November 15, 2001. The Proposal Evaluation Plan for the translator was completed on December 14, 2001. Requirements Validation meetings were conducted on the 837D, 837I, 837P and 835 during October thru December. National EDI and Nebraska SNIP workgroups continue to be monitored. MMIS HIPAA Oversight and Steering Committees were established and meetings are in progress.

ValueOptions. This project modifies the MMIS to allow the processing and payment of claims currently processed by ValueOptions. The project will be completed in four stages. The first stage, implemented on December 4, 2001, suspended the claim with ValueOptions services instead of denying payment. The second stage, scheduled January 16, 2002, will implement the pricing methods for Outpatient and HCFA1500 Services. The third stage, scheduled January 31, 2002, will implement the pricing methods for Inpatient, Home Health, and Outpatient Observation Services. The fourth and final stage will accept and process against the ValueOptions authorizations.

Medicaid Managed Care Support. Activities include continuing encounter data, enrollment broker support, and client notifications. Mutual of Omaha's Wellness Option has discontinued its contract with the Nebraska Medicaid Managed Care Program. The conversion was completed on October 4, 2001.

## **Health and Human Services System N-FOCUS**

The project status report indicates that the project is on schedule, within budget, and on target to meet objectives. The report on the status of the N-FOCUS system includes financial status, monthly benefits / payments summary, priorities, and Gantt chart.

N-FOCUS is currently implementing five very large projects: 1) Electronic Benefit Transfer (EBT) for Food Stamps, 2) incorporation of Developmental Disabilities (DD) system functionality with the demise of their ECHO system, 3) A78 which completes the conversion of

the Expert System software (AION) from version 7 to version 8, 4) creating a new print architecture and 5) implementing system changes related to the Nebraska Family Portrait. Our ability to respond to any new projects will be limited by the workload we are currently experiencing and reduced staff due to budget constraints. Nevertheless, N-FOCUS has been responding to a new technical issue of using Windows 2000 operating system vs. NT (which is the operating system for both N-FOCUS and CHARTS).

The next planned N-FOCUS release is scheduled for February 11, 2002. Example of functionality scheduled for this release:

- 1) Final functionality for the federally required EBT (Electronic Benefit Transfer) for the Food Stamp program. (A major federal review of EBT functionality is scheduled for December 2001. February 2002 is scheduled for the pilot implementation.)
- 2) Nebraska Family Portrait initiative: enhancement to the child welfare narratives (spell check and increased space), reports
- 3) SACWIS/AFCARS: changes to support federally mandated requirements for child welfare
- 4) Batch sweep age alerts (may be implemented even sooner)
- 5) Redesign of office management function to allow supervisors to update their own supervisory unit online (currently must go through the Help Desk)

#### **Public Employees Retirement Systems NPERS INFORMATION TECHNOLOGY PROJECT**

The project status report for the quarter ending September 30, 2001 indicates that Phase II of the project is on schedule, within budget, and on target to meeting objectives and requirements. There are no issues that pose additional risk or problem areas encountered. A set of spreadsheets attached to the report provides detailed expenditure information for eight projects that are components of the entire system.

Accomplishments during this reporting period include:

1. Continue work and complete CSA on Benefits Processing.
2. Continue work and complete GAP analysis on Benefits Processing.
3. Continue work and complete Benefits Processing prototype system.
4. Complete Benefits Processing prototype review.
5. Finalize concept of operations for DC plan processing with Ameritas.
6. Finalize concept of operations for interfacing with NIS on general ledger processing.
7. Finalize concept of operations for external interfaces to DB plan processing.
8. Implement Workflow Database System into production environment.

#### **Department of Roads NEBRASKA ONLINE TRUCK PERMIT ISSUANCE SYSTEM**

The project status report for the period ending December 31, 2001, indicates that the project is behind schedule, but within budget and on target to meeting objectives and requirements. A working prototype was completed on time, but subsequent phases are waiting legal approval of liability language for word order 2 and beyond.

**DRAFT**  
**Nebraska Information Technology Commission**  
**NETCOM Pilot Project Endorsement**  
**Thursday February 21, 2002**

**(Date of last revision: 2/8/2002, 5 P.M.)**

**A. Project Summary**

NETCOM is an acronym for Nebraska Telecommunications, which is the name of the state's data and video communications system. The NETCOM project is an effort to aggregate purchasing power of public entities in order to achieve several goals regarding telecommunications services. The pilot project will serve as a proof of concept on a smaller scale prior to statewide implementation.

**B. Statutory Responsibility of the NITC**

The NETCOM pilot project serves the following statutory directives of the NITC.

1. **Section 86-1502 (2).** It is the intent of the State of Nebraska to support the development of a unified statewide telecommunications infrastructure. The statewide telecommunications infrastructure will be scalable, reliable, and efficient. It is further the intent of the Legislature that the provisions of sections 86-1501 to 86-1514 serve to coordinate the state's investments in information technology in an efficient and expeditious manner.
2. **Section 86-1606 (3).** [The Commission shall] review and adopt policies to provide incentives for investments in information technology infrastructure services;
3. **Section 86-1514 (1).** It shall be the policy of the state to ... (b) Stimulate the demand to encourage and enable long-term infrastructure innovation and improvement; and (c) Organize technology planning in new ways to aggregate demand, reduce costs, and create support networks; encourage collaboration between communities of interest; and encourage competition among technology and service providers.

**C. History**

In November 1998 the Nebraska Information Technology Commission requested a feasibility study on whether public spending on telecommunications could be leveraged in a way that advances the availability of broadband services statewide. In partnership with the NITC, the Division of Communications (DOC) conducted an inventory and needs assessment of telecommunications in the state. The study included face-to-face interviews with approximately 250 participants, 410 survey forms, and 3 focus groups with over 125 participants. The study surveyed state agencies, higher education, K-12 education, local government, health care providers, libraries, and other communities of interest. The purpose was to document as thoroughly as possible current and future demand for telecommunications.

The outcome of the needs assessment study was a recommendation to the NITC that the state explore the feasibility of aggregating public telecommunications demand by using a “prime contractor with postalized rates over a private telecommunications infrastructure”. The NITC accepted this recommendation, and DOC with assistance of a broad-based advisory group developed the NETCOM Request for Proposals (RFP). Some of the key goals of the RFP included:

1. To reduce voice, data, and video communications costs of state government, and/or to provide additional value-added services at reasonable rates;
2. To reduce administrative burdens/complexities (i.e., multiple contracting, multiple billing, order entry) by working with a single prime contractor for coordination activities;
3. To improve quality assurance, service level capabilities, and network management/monitoring through the creation of a Network Operations Center (NOC);
4. To reduce the disparity of costs among users through adoption of postalized rates;
5. To provide a telecommunications infrastructure that will support governmental, educational and economic development initiatives throughout the state;
6. To leverage the state’s purchasing power to promote economic development by expanding availability of broadband services to more areas of the state.

The RFP generated five bids. After extensive review, the Division of Communications rejected all bids because they failed to meet the goals of the RFP. Specifically, each of the bids proposed to build a private network, which would have required a significant outlay of state funds and would have precluded any economic development benefits to small towns and rural Nebraska. A fundamental premise of NETCOM from the beginning has been to leverage state spending in a way that encourages investment in telecommunications infrastructure in communities. None of the proposals met that key objective.

#### **D. Options**

There are two basic options under consideration. One option to continue the work toward a statewide solution by undertaking a proof of concept scenario in one or more strategic locations within the state. Although a proof of concept scenario may not demonstrate every advantage of full deployment of a statewide network, demonstration of the administrative, financial and operational issues associated with this project would give the participants and the telecommunications providers the ability to assess the achievement of the goals defined. The major advantage of this approach is a high probability of success without committing to a statewide deployment. A disadvantage is that this proof of concept expands the timeframe for implementation of a statewide network outside of the proof of concept area.

The other option is to issue a revised RFP for statewide telecommunications services. To be successful, a new RFP would need to address many of the barriers seen in the

first RFP by telecommunications providers. These included items such as a demonstration of firm commitments by potential participants; explicit sources of funding to buy down the rates for high cost areas to achieve postalized rates, demonstration of private need for services, etc. The advantage to this option is immediate, statewide coverage. The disadvantage is the legal and logistical difficulty of organizing potential participants on a statewide basis. Also, there is the risk of not having any proposals that meet the state's needs at an affordable price.

**E. Recommendation**

The Technical Panel recommends that the NITC endorse a pilot project, as described below.

## **NETCOM Pilot Project Description**

### **A. Purpose**

The purpose of the NETCOM Pilot Project is to demonstrate the feasibility and benefits of aggregating demand for telecommunications services among public entities. The pilot project will also serve to identify administrative, procedural, and technical issues, and make recommendations for resolution, prior to statewide implementation.

### **B. Charter**

The NETCOM Pilot Project will operate under Technical Panel of the NITC, pursuant to the Charter established for the Network Architecture Work Group. As identified in that Charter, the workgroup sponsor will be Brenda Decker, Director of the Division of Communications, Department of Administrative Services. The workgroup sponsor, as well as the Network Architecture Work Group, is responsible for all aspects of the pilot project.

The Network Architecture Work Group shall make recommendations to the Technical Panel on design, management, and administrative issues.

### **C. Goals**

To the greatest extent feasible, the pilot project will accomplish the following goals:

1. Document cost savings from aggregation;
2. Demonstrate interagency and intergovernmental partnerships;
3. Establish administrative arrangements;
4. Implement and support emerging technologies; and
5. Demonstrate economic development potential.

### **D. Pilot Selection Process**

#### **1. Initial Pilot**

The selection of the location for the initial pilot project will depend on the following factors:

- a. Joint requirements of the University of Nebraska and State of Nebraska to meet immediate telecommunications needs;
- b. Potential for additional state or local partners/participants including the general public and local businesses;
- c. A local telecommunications provider that will participate in a pilot project that promotes the goals of the NETCOM RFP. This provider must also be willing to make the necessary investment in the local telecommunications infrastructure in a timely manner, and promote economic development opportunities within the community;
- d. Cost-effective pricing for the local and long-haul components; and
- e. Other factors that will promote the goals of the pilot project.

#### **2. Additional Pilot Projects**

The initial pilot project may be sufficient to achieve the purpose and goals stated earlier. The state may also consider conducting additional pilot projects



in other geographic locations if it is deemed beneficial. The same factors listed in Section F (1) would apply to choosing another location. Other considerations would include:

- a. Strengthening the business case and potential for success of statewide implementation;
  - b. Community interest in promoting economic development opportunities that rely on broadband technologies;
  - c. Including new types of partners as telecommunications users;
  - d. Expanding to other geographic areas with different demographic and economic characteristics.
3. Statewide Expansion
- The purpose of the pilot project(s) is to pave the way for statewide implementation as rapidly as possible. Experience with the pilot project(s) will help determine the method and timetable for statewide implementation. In addition, the following issues will need resolution:
- a. Administrative management, including ordering and billing;
  - b. Technical support and quality assurance;
  - c. Disparity of costs between low-cost and high-cost areas;
4. Relationship to the Nebraska Network Work Group
- The purpose of the NETCOM pilot project is to demonstrate the feasibility and benefits of aggregating raw bandwidth requirements of multiple entities. The Nebraska Network Work Group is exploring the feasibility of a joint operation to develop a shared digital network serving multiple entities. The Nebraska Network Work Group will make recommendations concerning the business case justification, requirements, participation, governance, operations, and funding. A successful NETCOM pilot project that can be expanded statewide will provide the foundation for possible implementation of shared digital networks.

## **E. Participation**

### **1. Telecommunication Users (Partners)**

To be part of the pilot project, a partner must be a department, agency, or subdivision of state government, pursuant to the statutory authority of the Division of Communications. Partners will be required to commit to the project through a signed memorandum of agreement.

### **2. Providers**

All providers must be “regulated and certificated by the Public Service Commission in the area or areas in which such services are rendered,” pursuant to Section 81-1120.19. All participating providers must be willing to work with the state to overcome any legal, technical, or administrative barriers to implementation in a timely manner.

**DRAFT**  
**Nebraska Information Technology Commission**  
**Nebraska Network Workgroup**  
**Charter**

(Date of Last Revision: January 14, 2002)

**A. Purpose**

The purpose of this charter is to evaluate the feasibility of the development of a digital network and related support functions to serve education, communities, and state government that could be accomplished through a statewide consortium.

**B. Background**

At its meeting on October 31, 2001, the NITC directed the chairs of the Education Council, State Government Council, and Technical Panel to “explore the concept of a Nebraska Education Network and recommend by January 2002 a method for evaluating the feasibility of such a network.” This charter defines the scope and method for conducting such a feasibility study.

The October resolution referred to an “Education Network,” and educational institutions would likely constitute the major participants in a comprehensive statewide network. In developing the charter, the Council representatives recognized the need to coordinate existing or proposed statewide networks serving other public purposes. Discussions with each of the NITC Councils underscored the interest among other sectors. Examples include the state’s videoconference network, telehealth, and even potential applicability to improved communications relating to Homeland Security. One of the objectives of the feasibility study is to identify potential participants.

**C. Sponsor**

Lt. Governor Dave Heineman, NITC Chair

The sponsor has the authority to oversee, monitor and guide the efforts of the workgroup on behalf of the Commission.

**D. Chair**

Steve Schafer, Chief Information Officer

The chair will organize and conduct meetings of the workgroup. The chair will be responsible for managing the objectives and achieving the schedule and deliverables set forth in this charter. The chair will represent the workgroup at presentations to the NITC, the NITC Councils, and any other organizations.

**E. Goals and Principles**

The activities of this workgroup will promote the following NITC goals:

1. Support the development of a unified statewide telecommunications infrastructure that is scalable, reliable, cost-effective and efficient;
2. Coordinate the state’s investment in telecommunications infrastructure so as to:
  - Develop new ways to aggregate demand, reduce costs, and create support networks;
  - Encourage collaboration within and among communities of interest;

3. Determine a broad strategy and objectives for developing and sustaining information technology development in Nebraska, including long-range funding strategies, so as to:
  - Encourage long-term infrastructure innovation and improvement;
  - Support the rapid deployment of appropriate technology;

The following principles shall guide the efforts of the workgroup:

1. The recommendations of the workgroup shall support efforts to aggregate state spending on telecommunications by agencies and educational institutions, including NETCOM;
2. Existing and proposed networks shall be consistent with any technical standards and guidelines adopted by the NITC, including video standards and migration plan;
3. The recommendations of the workgroup shall conform to the State's statutory policy of acquiring telecommunications services from the private sector;
4. The proposed network should involve a critical mass of state and local public sector demand for advanced telecommunications services that will encourage deployment of such services to private sector households and business firms within the state;
5. The proposed network should promote a minimum level of access to telecommunications services for state and local public sector users at a reasonable price, regardless of geographic location within the state.

#### **F. Objectives**

The objectives of the workgroup include the following:

1. Report on the strengths and deficiencies of existing telecommunications networks serving state and local public sector entities;
2. Examine the strengths, weaknesses, opportunities, and risks pertaining to the concept of a statewide digital network;
3. Basic requirements and critical success factors for a statewide digital network;
4. Address security issues related to a statewide digital network;
5. Evaluate different models for implementing a statewide consortium, including participation, governance, and operational authority;
6. Solicit suggestions and comments from affected entities;
7. Report findings and recommendations, including relationship to NETCOM and incremental options for consideration by the NITC;
8. Prepare a business case and estimate of fiscal impact for all recommendations and options;
9. Report on different funding models and strategies and the corresponding levels of service;
10. If needed to attain the goals listed above in an efficient manner, develop a set of statutory changes for consideration by the NITC for recommendation to the Governor and Legislature.

#### **G. Membership of the Workgroup [See Appendix 1 for Membership Directory]**

The Workgroup membership shall be composed of the following positions and affiliations:

Education: Two members each from K-12 and Higher Education, as determined by the NITC Education Council;

Communities: One member each from telehealth, public libraries, and local government, as determined by the NITC Community Council;

State Government: The Chief Information Officer, a representative from the Public Service Commission;

Technical Panel: One member each from Nebraska Educational Telecommunications, University of Nebraska Computing Services Network, DAS Division of Communications, and DAS Information Management Services, as determined by the NITC Technical Panel.

## **H. Operational Support**

The Office of the CIO shall provide staff support for the workgroup and may acquire additional support as necessary to expedite this project. Members of the workgroup will be eligible for travel reimbursement pursuant to state statute.

## **I. Relationship to NETCOM**

NETCOM is an acronym representing the **NE**braska **Te**le**COM**munications Contract, an RFP for a Service Contract Award (SCA) # SCA-0207. The RFP was issued by the State of Nebraska, Department of Administrative Services on August 27, 2001, for the purpose of selecting a qualified entity to assume the position of a “prime contractor” for implementation of a statewide telecommunications network. On October 19, 2001, the State rejected all proposals and is now reassessing its options for achieving the goals of NETCOM.

The prime contractor concept is defined as the State contracting for the development of the Physical layer and Data Link layer of the OSI 7-layer model under a competitive procurement from a single statewide prime telecommunications service provider. This service provider would offer these telecommunications services to all levels of state and local government, including K-12, post-secondary and higher education. Service Level Agreements (SLA) and performance parameters such as Quality of Service (QoS), circuit availability, and lead times for service implementation, among others, would be defined. The prime contractor would be expected to provide end-to-end services through subcontracting or joint ventures with the incumbent local exchange carriers (ILEC), competitive local exchange carriers (CLEC), Interexchange carriers (IXC), and any other telecommunications service providers as allowed by law.

For all practical purposes, NETCOM can best be described as delivering layer 1, Physical, and layer 2, Data Link, on the OSI 7-layer model. [See Appendix 2]

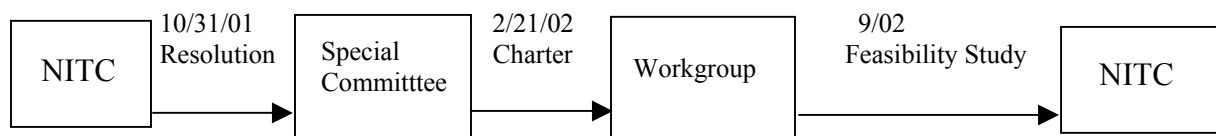
The Nebraska Network, if developed, would be presumed to deliver all or a portion of layers 3-6, according to the OSI 7-layer model. The Network, if developed, could best be described as the delivery and management of an array of digital services (data, video, or voice) provided to the various members.

## **J. Definitions**

For purposes of this charter, the Open System Interconnections (OSI) 7-layer model shall be used. See Appendix 2 for elaboration and definitions of the seven layers.

## K. Proposed Schedule and Deliverables

| <u>Due Date</u>  | <u>Deliverables</u>   |
|------------------|---|
| January 23, 2002 | Present workgroup charter to the NITC   |
| February 2002    | Phase 1 <ul style="list-style-type: none"> <li>• Organize membership</li> <li>• Review existing networks</li> <li>• Identify strengths and weaknesses of existing systems</li> <li>• Review networks from other states</li> <li>• Identify statutory authority and constraints</li> <li>• Prepare summary report</li> </ul>           |
| March 2002       | Phase 2 <ul style="list-style-type: none"> <li>• Identify goals and objectives</li> <li>• Determine primary functions to be served</li> <li>• Establish high-level requirements</li> <li>• Identify stakeholders and potential participants</li> <li>• Identify critical success factors</li> <li>• Prepare summary report</li> </ul> |
| April 2002       | Phase 3 <ul style="list-style-type: none"> <li>• Review models from other states</li> <li>• Review operational models</li> <li>• Review governance models</li> <li>• Prepare summary report</li> </ul>  |
| May 2002         | Phase 4 <ul style="list-style-type: none"> <li>• Review models from other states</li> <li>• Review funding options</li> <li>• Develop business case</li> <li>• Prepare summary report</li> </ul>  |
| June 2002        | Phase 5A <ul style="list-style-type: none"> <li>• Prepare findings and conclusions</li> </ul>   |
| June 2002        | Phase 5B <ul style="list-style-type: none"> <li>• Conduct risk assessment</li> <li>• Evaluate business case</li> <li>• Develop draft recommendations</li> <li>• Prepare draft final report</li> </ul>   |
| June 2002        | Public review process (15 day comment period)   |
| July 2002        | Phase 6 <ul style="list-style-type: none"> <li>• Review, revise and adopt final report</li> </ul>   |
| August 2002      | Present draft final report to affected NITC Councils and Technical Panel  |
| Sept 2002        | Present Final Report to NITC  |



## Appendix 1: Membership Directory

|                 |                      |   |
|-----------------|----------------------|---|
| Education       | K-12                 | Alan Wibbels, ESU 10, <a href="mailto:awibbels@esu10.org">awibbels@esu10.org</a> , 308-237-5927                         |
|                 | K-12                 | Ed Rastovski, Wahoo P.S., <a href="mailto:erastovski@aol.com">erastovski@aol.com</a> , 402-443-3051                     |
|                 | Higher Ed            | Kent Hendrickson, UNL, <a href="mailto:khendrickson1@unl.edu">khendrickson1@unl.edu</a> , 402-472-2311                  |
|                 | Higher Ed            | Dennis Linster, Wayne St., <a href="mailto:DeLinst1@wsc.edu">DeLinst1@wsc.edu</a> , 402-375-7286                        |
| Community       | Telehealth           | Ted Schultz, NAHHS, <a href="mailto:tschultz@nahhsnet.org">tschultz@nahhsnet.org</a> , 402-458-4907                     |
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## Appendix 2: OSI 7-layer model

The ISO (International Standards Organization) has created a layered model, called the OSI (Open Systems Interconnect) model, to describe defined layers in a network operating system. The purpose of the layers was to provide clearly defined functions describing how applications running on network-aware devices may communicate with each other. Each layer has a standard defined input and a standard defined output. Understanding the function of each layer is instrumental in understanding data communication within local, metropolitan or wide area networks.

### 7) Application Layer

The *Application layer* represents the level at which applications access network services. This layer represents the end-user services that directly support applications such as software for file transfers, database access, and electronic mail.

### 6) Presentation Layer

The *Presentation layer* translates data from the Application layer into an intermediary format, ready for use by the running application. This layer also manages security issues by providing services such as data encryption, protocol conversions, and compresses data so that fewer bits need to be transferred on the network.

### 5) Session Layer

The *Session layer* provides for two communicating presentation entities to exchange data with each other. It allows two applications on different computers to establish, use, and end a session. This layer establishes dialog control between the two computers in a session, regulating which side transmits, plus when and how long it transmits.

### 4) Transport Layer

The *Transport layer* handles error recognition and recovery and relieves the session layer of the burden of ensuring data reliability and integrity. It also repackages long messages when necessary into small packets for transmission and, at the receiving end, rebuilds packets into the original message. The receiving Transport layer also sends receipt acknowledgments.

### 3) Network Layer

The *Network layer* provides a means for communicating open systems to establish, maintain and terminate network connections. It addresses messages and translates logical addresses and names into physical addresses. It also determines the route from the source to the destination computer and manages traffic problems, such as switching, routing, and controlling the congestion of data packets.

### 2) Data Link Layer

The *Data Link layer* packages raw bits from the Physical layer into frames (logical, structured packets for data) and defines the access strategy for sharing the physical medium. This layer is responsible for transferring frames from one computer to another, without errors. After sending a frame, it waits for an acknowledgment from the receiving computer.

### 1) Physical Layer

The *Physical layer* defines the physical and electrical characteristics of the network. It transmits bits from one computer to another and regulates the transmission of a stream of bits over a physical medium. This layer defines how the cable is attached to the network adapter and what transmission technique is used to send data over the cable.